

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Liew, et. al.  
Serial No.: Not Yet Assigned  
Filed: August 26, 2003  
Entitled: Beta-2 Microglobulin (B2M) and B2M Related  
Gene Products for the Regulation of Osteoarthritis  
Pathogenesis and Chondrocyte Proliferation

03916 U.S. PTO  
10/649959  
08/26/03

**CERTIFICATE OF MAILING UNDER 37 CFR 1.10**

I hereby certify that the paper (and any paper or fee referred to as being enclosed) is being deposited with the United States Postal Service using Express Mail to Addressee Service, under 37 C.F.R. Section 1.10, **Express Mail Label No. EL 928101145 US** on this date, **August 26, 2003**, postage prepaid, in an envelope addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Kathleen M. Williams

Name of Person Mailing Paper



Signature of Person Mailing Paper

**Mail Stop Patent Application**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, VA 22313-1450**

**TRANSMITTAL LETTER**

Enclosed for filing in the above-identified patent application, please find the following documents:

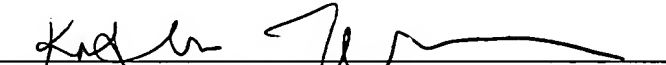
1. New Patent Application Transmittal;
2. Patent Application, (67 pages);
3. Six (6) sheets of informal drawings of Figs 1a - 5;
4. Application Data Sheet;
5. Paper Copy of Sequence Listing;
6. Sequence Listing in computer readable format;
7. Statement Under 37 C.F.R. §1.821(f) and (g);
8. Check in the amount of \$711.00 for the requisite filing fee; and
9. Return Post Card.

Pursuant to 37 C.F.R. § 1.27, Applicant claims small entity status.

The Commissioner for Patents is hereby authorized to charge any additional fees or credit any overpayment in the total fees to Deposit Account No. 16-0085, Reference No. 4231/2032. A duplicate of this transmittal letter is enclosed for this purpose.

Respectfully submitted,

Date: August 26, 2003



Name: Kathleen M. Williams

Registration No.: 34,380

Customer No.: 29933

Palmer & Dodge LLP

111 Huntington Avenue

Boston, MA 02199-7613

Tel: 617-239-0100

## NEW UNITED STATES UTILITY PATENT APPLICATION TRANSMITTAL

Atty. Docket No.: 4231/2032

**CERTIFICATE OF MAILING UNDER 37 CFR 1.10**

I hereby certify that the paper (and any paper or fee referred to as being enclosed) is being deposited with the United States Postal Service using Express Mail to Addressee Service, under 37 C.F.R. Section 1.10, **Express Mail Label No. EL 928101145 US** on this date, **August 26, 2003, 2003**, postage prepaid, in an envelope addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Kathleen M. Williams

Name of Person Mailing Paper



Signature of Person Mailing Paper

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Enclosed herewith is a new patent application of:**

First Named Inventor (or application identifier): Liew, et. al.

Title of Invention: Beta-2 Microglobulin (B2M) and B2M Related Gene Products for the Regulation of Osteoarthritis Pathogenesis and Chondrocyte Proliferation

Type: ☒ New  
☐ Continuation of: \_\_\_\_\_  
☐ Continuation-in-Part of: \_\_\_\_\_  
☐ Divisional of: \_\_\_\_\_  
which is hereby incorporated by reference in its entirety into the application filed herewith;

**and includes the following papers:**

1. ☒ Specification 67 pages (including specification, claims, abstract)/ 19 claims (11 independent)
2. ☒ Declaration/Power of Attorney is:  
☐ Executed ☐ Unexecuted ☐ Executed copy from Parent Application  
☒ NOT included, but deferred under 37 C.F.R. § 1.53(f).
3. ☒ 6 Distinct sheets of ☐ Formal ☒ Informal Drawings
4. ☒ Application Data Sheet
5. ☐ Preliminary Amendment.
6. ☐ Information Disclosure Statement  
☐ Form 1449 ☐ A copy of each cited prior art reference (as necessary)
7. ☐ Assignment with Recordation Cover Sheet.
8. ☒ Priority is hereby claimed under 35 U.S.C. § 119 based upon the following application(s):

Country	Application Number	Date of Filing (day, month, year)
US	60/406,494	August 28, 2002

9. ☐ Priority is hereby claimed under 35 U.S.C. § 120 based upon the following application(s):

Application Number	Date of Filing (day, month, year)

10. ☐ Priority is hereby claimed under 35 U.S.C. § 121 based upon the following application(s):

Application Number	Date of Filing (day, month, year)

# NEW UNITED STATES UTILITY PATENT APPLICATION TRANSMITTAL

Atty. Docket No.: 4231/2032

The above applications from which priority is claimed are hereby incorporated in their entirety into the application filed herewith.

11. ☐ Priority document(s).
12. ☐ Microfiche Computer Program (Appendix).
13. ☒ Nucleotide and/or Amino Acid Sequence Submission.  
     ☒ Computer Readable Copy.  
     ☒ Paper Copy (identical to computer copy).  
     ☒ Statement verifying identity of above copies.
14. ☐ Request for Non-Publication and Certification under 35 USC 122 (b)(2)(B)(i)
15. ☒ Statement of Small Entity Status, Pursuant to 37 C.F.R. §1.27.
16. Calculation of Fees:

FEES FOR	TOTAL CLAIMS	EXCESS CLAIMS	FEE	AMOUNT DUE
Basic Filing Fee (37 C.F.R. § 1.16(a))				\$750.00
Total Claims in <b>Excess of 20</b> (37 C.F.R. § 1.16(c))	19	0	\$18.00	0.00
Independent Claims in <b>Excess of 3</b> (37 C.F.R. § 1.16(b))	11	8	\$84.00	672.00
Multiple Dependent Claims (37 C.F.R. § 1.16(d))	NO		\$280.00	0.00
Subtotal - Filing Fee Due				\$1,422.00
Reduction by 50%, if Small Entity (37 C.F.R. §§ 1.9, 1.27, 1.28)	MULTIPLY BY 0.50			\$711.00
<b>TOTAL FILING FEE DUE</b>				<b>\$711.00</b>
Assignment Recordation Fee (if applicable) (37 C.F.R. § 1.21(h))	0		\$40.00	
<b>GRAND TOTAL DUE</b>				<b>\$711.00</b>

17. PAYMENT is:  
☒ included in the amount of by our enclosed check. The Commissioner is hereby authorized to charge any deficiencies in the fees to Deposit Account 16-0085, Ref. 4231/2032.  
☐ not included, but deferred under 37 C.F.R. § 1.53(f).


18. All correspondence for the attached application should be directed to:

**Kathleen M. Williams**  
**Customer Number 29933**  
 111 Huntington Avenue  
 Boston, MA 02199-7613

19. Other: \_\_\_\_\_

Respectfully submitted,

Date: August 26, 2003

By:   
 Name: Kathleen M. Williams  
 Registration No.: 34,380